

Triconex - DCS System

3503E

24 VAC/VDC TMR Digital Input Module

Technical specifications

Input architecture	TMR digital input with self-test
Nominal input voltage	24 VAC/VDC
Input points	32, commoned in groups of 8
Input frequency	DC or 47 to 63 Hz
Recommended DC input range	20 to 42.5 VDC
Maximum input voltage	42.5 VAC/VDC
OFF to ON threshold	15 VAC/VDC typical; 18 VAC/VDC worst case
ON to OFF threshold	8 VAC/VDC typical; 6 VAC/VDC worst case
Nominal turn-on current	6 to 9 mA
Input impedance	> 1.25 kΩ nominal
OFF to ON delay	< 8 ms
ON to OFF delay	< 15 ms
Point isolation	1,000 VAC minimum; 1,500 VDC minimum
Logic power	< 10 W
Module indicators	Pass, Fault, Active
Point indication	One state indicator per point

Description

Triconex 3503E is a self-testing TMR digital input module with 32 points commoned in groups of eight for nominal 24 VAC/VDC field signals.

Three independent input channels condition and process the field states, while continuous diagnostics and per-point indication support high-integrity safety input acquisition.

Applications

- Emergency shutdown field-input monitoring
- Burner management permissive and trip input acquisition
- Fire and gas detector state monitoring

Technical note

Triconex 3503E is not recommended for shunt-diode intrinsic-safety barriers; verify the complete field loop, termination hardware, thresholds and safety test before service.

Evidence boundary

The Tricon planning guide explicitly identifies Model 3503E and its point count, grouping, thresholds, delays, isolation, diagnostics and power data.